GERD, S.V.

Use of live specimens in practical zoological work in the first course at a pedagogical institute. Uch.zap.Ped.inst.Gerts.110: 169-180 '55. (MLRA 9:7)
(Zoology--Study and teaching)

GERD, Sergey Vladimirovich; MATAROVA, N.V., redaktor; MAKRUSHIN, V.A., tekhnicheskiy redaktor

[Terrariums in the schools; our amphibians and reptiles] Terrarium v shkole; nashi zemnovodnye i presmykaiushchiesia. Posobie dlia uchitelei srednei shkoly. Leningrad, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshchenila RSFSR, Leningradskoe otd-nie, 1956. 134 p. (MLRA 9:10)

(Reptiles) (Vivariums) (Amphibia)

GERD, S.

Ichthyological research carried out by the Karelian Branch of the Academy of Sciences of the U.S.S.R. Trudy Kar.fil. AN SSSR no.5:3-5 '56. (MLRA 10:7)

1. Leningradskiy pedagogicheskiy institut imeni A.I.Gertsena.
(Karelia--Ichthyology)

GERD, S.V.

Dividing Karelia into limnological regions. Trudy Kar.fil. AN SSSR no.5:47-75 '56. (MLRA 10:7)

1. Leningradskiy pedagogicheskiy institut imeni A.I.Gertsena.
(Karelia--Lakes)

GERD, S.V.

"Life in the fresh waters of the U.S.S.R.," vol.4, pt.1. Reviewed by S.V.Gerd. Zool.zhur. 36 no.8:1266-1269 Ag '57. (MLRA 10:9)
(Fresh-water biology)

GERD, S.V.

"Trudy" of the White Russian Research Institute of the Fishing Industry, vol.2, 1958. Reviewed by S.V.Gerd. Zoolzhur. 39 no.4: 629-631 Ap '60. (MIRA 13:11)

(White Russia--Fisheries)

GERD, S.V.

"Uchenye zapiski" of the Moscow City Pedagogical Institute, Department of Zoology. Nos.1-7, 1951-1958. Reviewed by S.V. Gerd. Zool. zhur. 39 no.6:951-953 Je '60. (MIRA 13:7)
(Zoological research)

GERD, S.V.

"Lakes of Karelia; nature, fishes and fishery management" (a reference book). Reviewed by S.V. Gerd. Zool. zhur. 39 no.11:1744-1746 N '60. (MIRA 14:1)

(Karelia--Fisheries) (Karelia--Lakes)

ZHADIN, Vladimir Ivanovich; GERD, Sergey Vladimirovich; YEFIMOV, A.L., red.; PASHCHENKO, O.V., red. kart; TATURA, G.L., tekhn. red.

[Rivers, lakes, and reservoirs of the U.S.S.R., their fauna and flora] Reki, ozera i vodokhranilishcha SSSR ikh fauna i flora. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1961. 997 p. (MIRA 14:9)

(Fresh-water biology)

GERD, S.V., doktor biol. nauk, nauchnyy red.[deceased]; KIKINOV, G.V., red.; GREYVER, I.K., tekhn. red.

[Transactions of the Syamozero Expedition]Trudy Syamozerskoi ekspeditsii. Petrozavodsk, Gos.izd-vo Karel'skoi ASSR. Vol.2.[Ichthyology, hydrobiology, and parasitology]Ikhtiologiia, gidrobiologiia i parazitologiia. 1962. 269 p. (MIRA 15:10)

1. Syamozerskaya kompleksnaya ekspeditsiya, 1954-1956.
(Syamozero--Freshwater biology)

POLEVODOV, A.P.; NIKASHINA, V.A.; GERDIYEVSKIY, A.V.; SENYAVIN, M.M.; KRUGER, A.Kh.

Radiochemical stability of ion-exchanging resins. Action of gamma and beta rays on cationites. Nauch.dokl.vys.shkoly; khim. i khim. tekh. no.4:761-764 '58. (MIRA 12:2)

1. Predstavlena kafedroy tekhnologii radioaktivnykh redkikh i rasseyannykh elementov Moskovskogo khimiko-tekhnologicheskogo instituta imeni D.I. Mendeleyeva.
(Base-exchanging compounds) (Gamma rays) (Beta rays)

GEORGIKOV, D. [Georgikov, D.]

Relationship between metal lattice energy and polarization coefficient of corresponding cations. Doklady BAN 17 no. 2:157-158 '64.

1. Submitted by S.Christov [Khristov, S.], Corresponding Member of the Bulgarian Academy of Sciences.

L 05721-67 EWT(m)/EWP(j)/T IJP(c) RM

ACC NR: AP6031805 SOURCE CODE: BU/0011/65/018/009/0833/0836

12

B

AUTHOR: Mihailov, M.; Gerdjikova, S.; Borisov, G.

ORG: Institute of Organic Chemistry, BAN

TITLE: Production of phosphorus-containing polyestermethacrylates

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 9, 1965, 833-836

TOPIC TAGS: phosphorus compound, polymer chemistry, flammability, esterification, oligomer

ABSTRACT: Some of the existing synthesized polyestermethacrylates have shown very good binding properties in the case of glass, plastics and film-forming substances and are commercially produced in the USSR. However, like most organic polymers, they suffer from the major drawback of being inflammable. Injections of phosphoric atoms or phosphorus-containing groups tend to reduce greatly this defect. Consequently, the authors investigated ways for synthesizing phosphorus-containing polyestermethacrylates (PEM) of varying structures. The present paper gives detailed description of PEM production by re-esterification of the diethylester of the benzylphosphonic acid with ethylene-glycol and a subsequent methacylation of the hydroxyl-containing oligomers. The polymerization of the synthesized benzylphosphonate PEM and the properties of the polymers obtained from such polymers is the subject of a separate study, the results of which will be published later.

This paper was presented by Corresponding Member BAN B. Kourtev on 31 May 1965.

[Orig. art. in Eng.] [JPRS: 34,518]

SUB CODE: 07 / SUBM DATE: 31May65 / SOV REF: 005 / OTH REF: 002

Card 1/1

0919 0552

L 4366-66 EWP(j) RM

ACC NR: AP5028422 SOURCE CODE: BU/0011/65/018/001/0043/0046

AUTHOR: Mihailov, M.; Gerdjikova, S.

ORG: Institute of Organic Chemistry, Bulgarian Academy of Science

TITLE: Varnishes from epoxydized ligninphenol resins

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 1, 1965, 43-46

TOPIC TAGS: epoxy plastic, resin, varnish

ABSTRACT: Ligninphenol epoxy resins (LPE) were first produced in 1962 by one of the authors (M. Mihailov, Ch. Budevska, "Compt. rend. Acad. bulg. Sci." 15, 1962, No 2, 155). The present article discusses the suitability of these resins as binding substances for varnishes. It describes the production of such a varnish, the production of adducts from diethylenetriamine, modifications of the LPE, and the preparation of coatings. Three tables describe in detail the composition and physico-mechanical properties of various coatings. The work was presented by B. Kourtev, Corresponding Member, 28 Aug 64. Orig. art. has: 1 figure, 3 tables. [JPRS]

SUB CODE: MT, OC / SUBM DATE: 28Aug64 / ORIG REF: 001

Card 1/1 KC

ACC NR: AP6031804 SOURCE CODE: BU/0011/65/018/009/0829/0832

AUTHOR: Mihailov, M.; Gerdjikova, S.

ORG: Institute of Organic Chemistry, BAN

TITLE: Production of liquid epoxy resins and varnish from sulfate lignin, phenol, and epichlorhydrin

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 9, 1965, 829-832

TOPIC TAGS: resin, varnish, sulfate, phenol, chlorhydrin, chemical production

ABSTRACT: The solid epoxy ligninphenol resins synthesized in 1962 by one of the authors contains from 15 to 20 p. c. of epoxy groups and soften at 75 to 95° (M. Mihailov, Ch. Budevska, Compt. rend. Acad. bulg. Sci., 15, 1962, No. 2, 155-158). Varnish was obtained from them through modification according to various methods (M. Mihailov, S. Gerdhikov, Ibid., 18, 1965, No. 1, 43). Presently, experiments were made to obtain liquid epoxy resins directly through the epoxidation of a phenol mixture with ligninphenol resin or with sulfate lignin. Epoxidation with epichlorhydrin was effected according to the method employed in obtaining solid epoxy ligninphenol resins. Other experiments aimed at finding ways and means to produce liquid epoxy resins from phenol and sulfate lignin in a still more simplified manner. The paper presents detailed description of the procedures used and presents the results in the form of tables. This paper was presented by Corresponding Member BAN B. Kourtev on 31 May 1965. Orig. art. has: 2 tables. [Orig. art. in Eng.] [JPRS: 34,518]

SUB CODE: 07 / SUBM DATE: 31May65 / ORIG REF: 002 / OTH REF: 001

Card 1/1

0919 0351

SOV/119-59-9-15/19

25(2),25(5)

AUTHORS: Gardler, V. S., Engineer, Chagin, I. M., Engineer

TITLE: The Reduction of the Defects in the Performance of an Automatic Piezometric Densimeter (Concentration Meter)

PERIODICAL: Priborostroyeniye, 1959, Nr 9, pp 28-29 (USSR)

ABSTRACT: In investigations on the automatic control of phosphoric acid extraction from apatite by the sulfuric acid method a piezometric densimeter type DPM (construction OKB) of the Gosudarstvennyy Komitet Soveta Ministrov SSSR po khimii (State Committee of the Council of Ministers USSR for Chemistry) was used. Results obtained in testing the densimeter type DPM-3 with the constructive design OKB are given in a table. The wide fluctuation range (up to 7.5% of full deflection) of the second instrument is striking. It was undesirable to reduce the oscillation deflections in order to avoid delay. The densimeter operates with an error not exceeding 4% of full deflection. This error is accepted as limit of accuracy for the operation of this densimeter. It is, however, very unsatisfactory, and the authors therefore undertook to find the sources of error and inaccuracy in the operation of the densimeter. The pipe which conducts air into the minus tube has a much larger volume than

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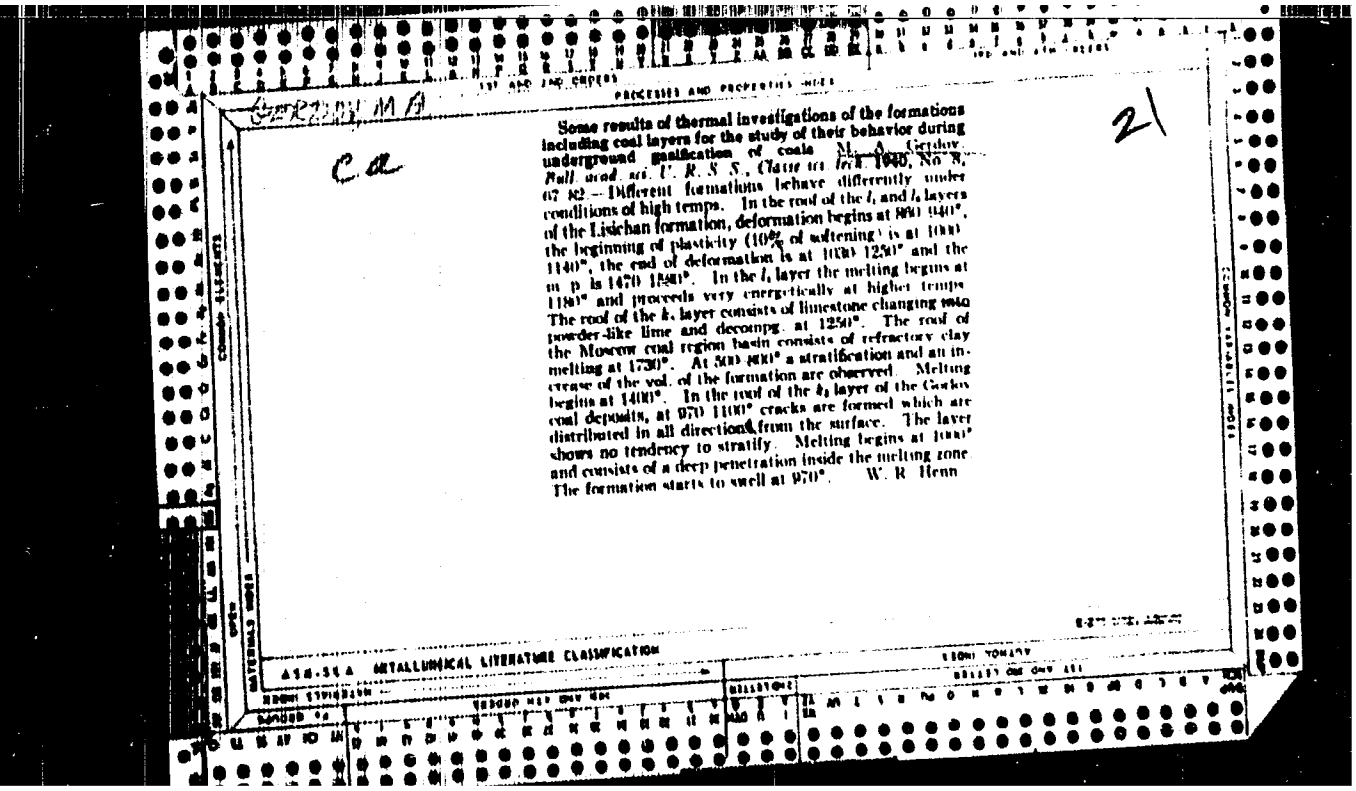
the plus tube. When air of an equal pressure is applied to both tubes, this buffer capacity thus prevents the air bubbles from constantly creeping through from the second bubbling minus tube. This is the reason for the considerable fluctuations of the deflections in the secondary instrument. These fluctuations can be eliminated without application of a damper, by introducing more air into the minus tube than into the plus tube. However, this procedure is complicated and inaccurate. More stable and exact operation of the densimeter could be accomplished by attaching a compensating volume, to equate the volumes of the air line pipes of the minus and plus tube. In this case the quantities of air passing into both tubes are equal and the instrument may be returned to its initial adjustment after repeated tuning simply by counting the air bubbles. As is apparent from a table, the performance of such a densimeter is very stable and accurate. The author was able to reduce the error to 2% and less, and attained good agreement between the deflections of the instrument and density controls of the fluid in question by means of a hydrometer. There are 1 figure and 2 tables.

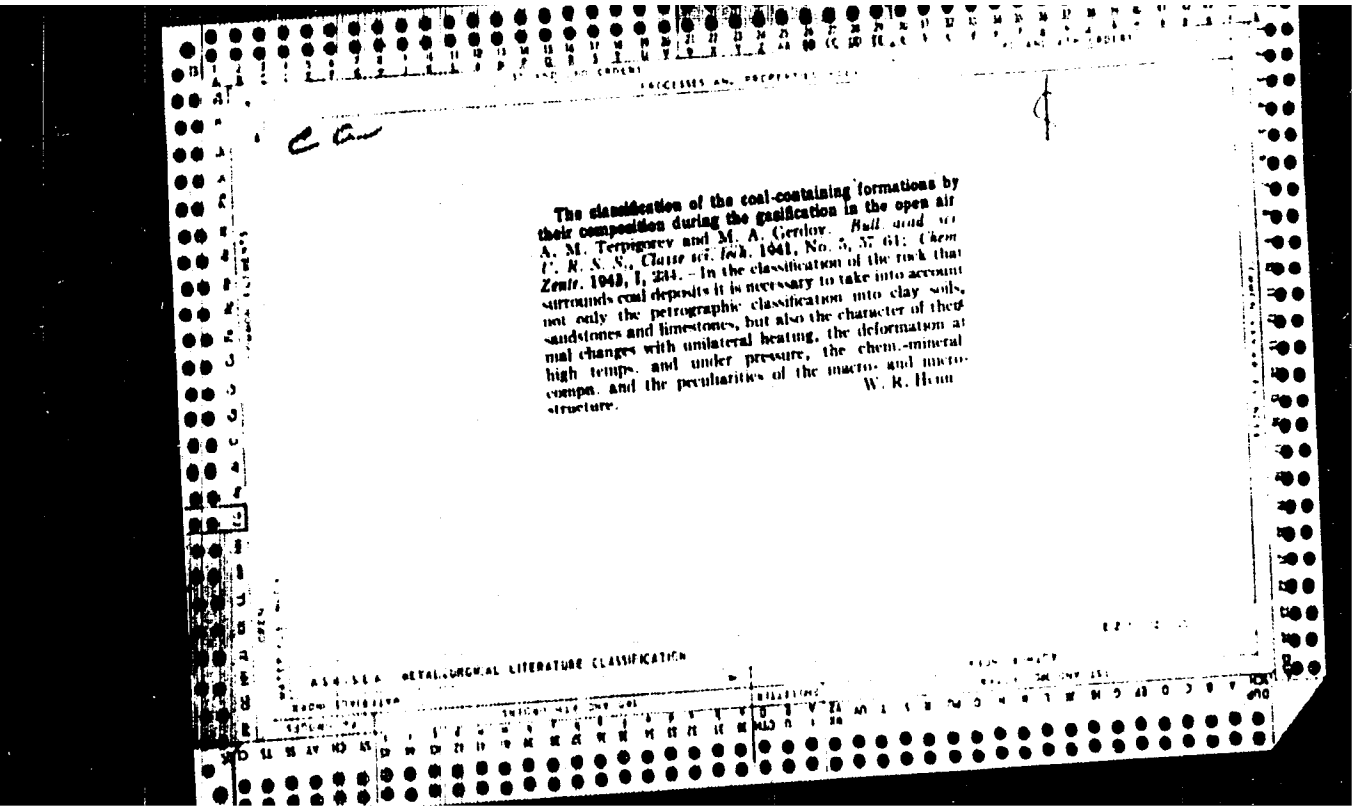
GERDMAN, D.L.; SILAKOVA, A.I.

Conversion of glutamine in muscles [with summary in English]. Biokhimiia 22 no.1/2:283-294 Ja-F '57. (MIRA 10:7)

1. Institut biokhimii akademii nauk Ukrainskoy SSR, Kiyev.
(MUSCLES, metabolism,
glutamine conversion (Rus))
(GLUTAMINE, metabolism,
musc., conversion (Rus))



Some results of thermal investigations of the formations including coal layers for the study of their behavior during underground gasification of coals. M. A. Gershov. *Bull. acad. sci. U. R. S. S., Classe sci. tech.* 1940, No. 8, 67-82.—Different formations behave differently under conditions of high temps. In the roof of the l_1 and l_2 layers of the Lisichan formation, deformation begins at 890-940°, the beginning of plasticity (10% of softening) is at 1080-1140°, the end of deformation is at 1080-1250° and the m. p. is 1470-1500°. In the l_1 layer the melting begins at 1180° and proceeds very energetically at higher temps. The roof of the k_1 layer consists of limestone changing into powder-like lime and decomps. at 1250°. The roof of the Moscow coal region basin consists of refractory clay melting at 1730°. At 500-800° a stratification and an increase of the vol. of the formation are observed. Melting begins at 1400°. In the roof of the d_3 layer of the Gorlov coal deposits, at 970-1100° cracks are formed which are distributed in all directions from the surface. The layer shows no tendency to stratify. Melting begins at 1080° and consists of a deep penetration inside the melting zone. The formation starts to swell at 970°. W. R. Henn



The classification of the coal-containing formations by their composition during the gasification in the open air A. M. Terpigorev and M. A. Gerilov. *Bull. acad. sci. U. R. S. S., Classe sci. tech.* 1941, No. 5, 57-61; *Chem. Zentr.* 1943, I, 234. – In the classification of the rock that surrounds coal deposits it is necessary to take into account not only the petrographic classification into clay soils, sandstones and limestones, but also the character of their mineral changes with unilateral heating, the deformation at high temps. and under pressure, the chem.-mineral compn. and the peculiarities of the macro- and micro-structure. W. R. Hunt

SKOCHINSKIY, A. A. (Academician); LINDIN, I. D.; GERDOV, M. A.

Mbr., Inst of Mining, Acad of Sci (-1943-)

"Concerning the Phenomena of Rapid Oxygen Impoverishment of the Atmosphere in Underground Workings," Iz Ak Nauk SSSR. Otdel, Tekh, Nauk, No. 11-12, 1943.

RR-52059019

TERPIGOREV, A.M.; OBRUCHEV, V.A. Academicians

Institute of Mining, Acad. of Sci., USSR (-1941-)

"Changes in the Fire Duct in the Process of Gasification of a Coal Bed (Working Hypothesis)." Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk, No. 6, 1944

BR 52059019

GFRDOV, M. A.

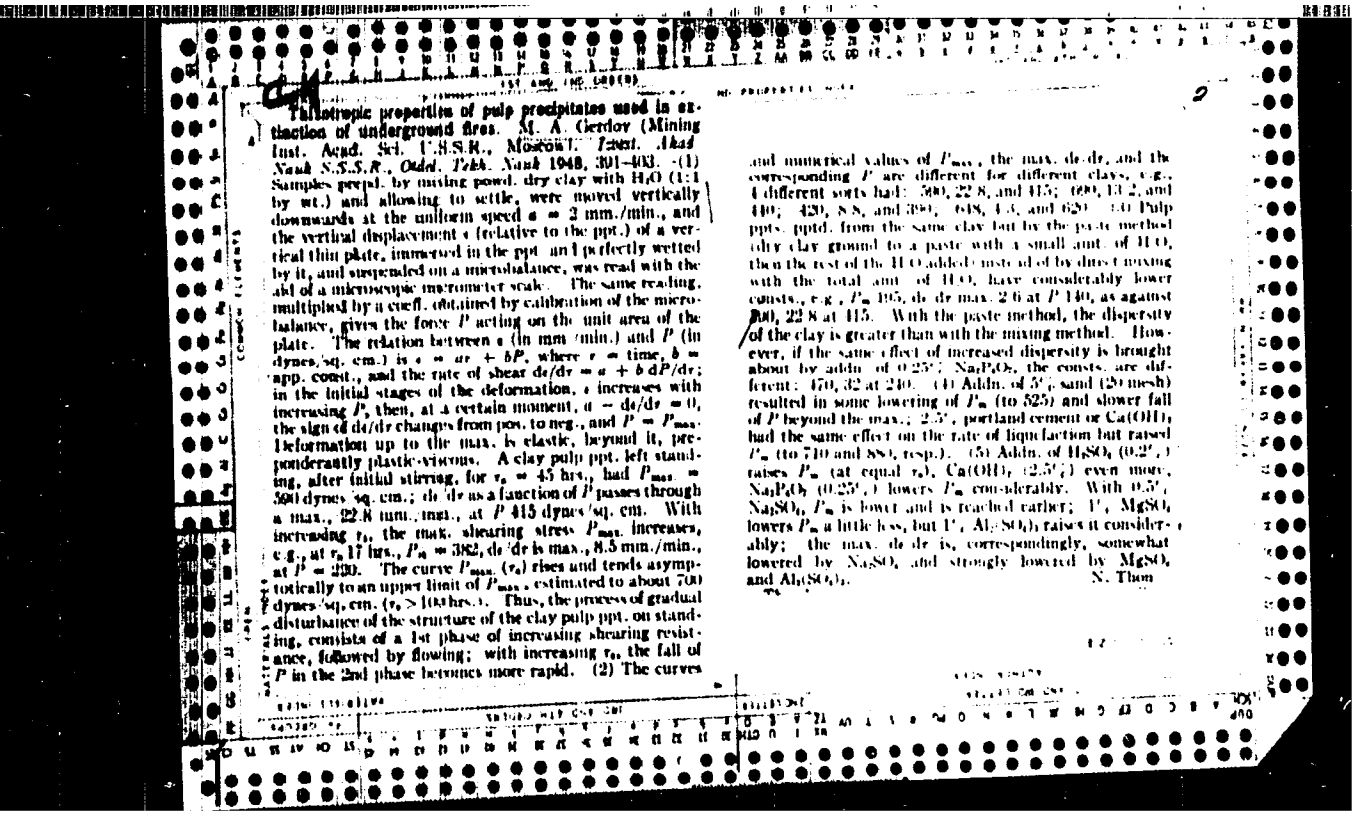
Mining Inst., Acad. Sci. USSR (-1946-)

"A Method for Comparative Estimation of Clay Pulps Used for Preventing and Fighting Subterraneous Endogenous Fires."

Iz. Ak. Nauk, Otdel Tekh. Nauk, No. 3, 1946

Gerdov, M. A. "On calculations of the maximum length of mine face permissible without supports", in the collection entitled: Voprosy gornogo dela, Iosgeolizdat, 1948, p. 204-12.

SO: U-2888, 12 Feb. 53, (Letopis' Zhurnal'nykh Statey, No. 2, 1949).



Thixotropic properties of pulp precipitates used in extraction of underground fires. M. A. Gerdov (Mining Inst. Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad Nauk S.S.S.R., Otdel. Tekh. Nauk* 1948, 391–403. (1) Samples prepd. by mixing powd. dry clay with H_2O (1:1 by wt.) and allowing to settle, were moved vertically downwards at the uniform speed a = 2 mm./min., and the vertical displacement s (relative to the ppt.) of a vertical thin plate, immersed in the ppt. and perfectly wetted by it, and suspended on a microbalance, was read with the aid of a microscopic micrometer scale. The same reading, multiplied by a coeff. obtained by calibration of the microbalance, gives the force P acting on the unit area of the plate. The relation between s (in mm./min.) and P (in dynes/sq. cm.) is $s = ar + bP$, where r = time, b = app. const., and the rate of shear $ds/dr = a + b\,dP/dr$; in the initial stages of the deformation, s increases with increasing P, then, at a certain moment, $a - ds/dr = 0$, the sign of ds/dr changes from pos. to neg., and $P = P_{max.}$; deformation up to the max. is elastic, beyond it, preponderantly plastic-viscous. A clay pulp ppt. left standing, after initial stirring, for r_0 = 45 hrs., had $P_{max.}$ = 560 dynes/sq. cm.; ds/dr as a function of P passes through a max., 22.8 mm./min., at P 415 dynes/sq. cm. With increasing r_0, the max. shearing stress $P_{max.}$ increases, e.g., at r_0 17 hrs., P_m = 382, ds/dr is max., 8.5 mm./min., at P = 220. The curve $P_{max.}$ (r_0) rises and tends asymptotically to an upper limit of $P_{max.}$, estimated to about 700 dynes/sq. cm. (r_0 > 10 hrs.). Thus, the process of gradual disturbance of the structure of the clay pulp ppt. on standing, consists of a 1st phase of increasing shearing resistance, followed by flowing; with increasing r_0, the fall of P in the 2nd phase becomes more rapid. (2) The curves and numerical values of $P_{max.}$, the max. ds/dr, and the corresponding P are different for different clays, e.g., 4 different sorts had: 560, 22.8, and 415; 600, 13.2, and 440; 420, 8.8, and 390; 648, 4.5, and 620. (3) Pulp ppts. ppted. from the same clay but by the paste method (dry clay ground to a paste with a small amt. of H_2O, then the rest of the H_2O added) mixed ad of by direct mixing with the total amt. of H_2O, have considerably lower consts., e.g., P_m 195, ds/dr max. 2.6 at P 140, as against 560, 22.8 at 415. With the paste method, the dispersity of the clay is greater than with the mixing method. However, if the same effect of increased dispersity is brought about by addn. of 0.25% $Na_4P_2O_7$, the consts. are different: 470, 32 at 240. (4) Addn. of 5% sand (250 mesh) resulted in some lowering of P_m (to 525) and slower fall of P beyond the max.; 2.5% portland cement or $Ca(OH)_2$ had the same effect on the rate of liquefaction but raised P_m (to 710 and 880, resp.). (5) Addn. of H_2SO_4 (0.2%) raises P_m (at equal r_0), $Ca(OH)_2$ (2.5%) even more, $Na_4P_2O_7$ (0.25%) lowers P_m considerably. With 0.5% Na_2SO_4, P_m is lower and is reached earlier; 1% $MgSO_4$ lowers P_m a little less, but 1% $Al_2(SO_4)_3$ raises it considerably; the max. ds/dr is, correspondingly, somewhat lowered by Na_2SO_4 and strongly lowered by $MgSO_4$ and $Al_2(SO_4)_3$.

N. Thon

1. GEROV, M. A., DR.

2. USSR (600)

4. Coal Mines and Mining

7. Problem of the physical nature of sudden coal and gas ejections in mining hard coal seams. Ugol' 27 no. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

GERDOV, M.A., doktor tekhn.nauk; BELOSHABSKAYA, Ye.I.; GRIGOR'YEVA, T.V.

Nature of the distribution of packing material fed by compressed air into an inclined opening. Podzem.gaz.ugl. no.3:43-45 '57. (MIRA 10:11)

1. Institut gornogo dela Akademii nauk SSSR.
(Coal gasification, Underground)

AUTHOR: Gerdov, M.M. SOV/108-13-7-7/14

TITLE: The Calculation of the Effective Range of a Pulse-Radio-Direction Finder Station According to Its Parameters and According to the Given Probability for Detecting the Target (Raschët dal'nosti deystviya impul'snoy radiolokatsionnoy stantsii po yeyë parametram i zadannoy veroyatnosti obnaruzheniya tseli)

PERIODICAL: Radiotekhnika, 1958, Vol. 13, Nr 7, pp. 55-62 (USSR)

ABSTRACT: Formulae are derived which make it possible to calculate the effective range of a pulse-radio-direction-finder station (RDS). These formulae connect the effective range with the RDS parameters and the given probability of detecting the target. The formulae are derived in consideration of the influence exercised by the internal noise of the RDS receiver and of the fluctuations of the reflected signal caused by the moving of the target. The occurrence of the intelligence signal and of interference at the output of the receiver are looked upon as compatible with each other. The formulae given here do not take into account the influence exercised by the reflections from the earth upon the forming of the RDS antenna-radiation diagram and of the dying down of radio waves in the atmosphere. The analysis of the

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The Calculation of the Effective Range of a Pulse-Radio-Direction Finder Station According to Its Parameters and According to the Given Probability for Detecting the Target

SOV/108-13-7-7/14

formulae obtained (9), (10), (11), (13) and (14) allows the following conclusions to be drawn: work with large-scale pictures makes it possible to increase not only the accuracy and the resolving power of the RDS but also their effective range in the case of a given probability of detection. In practice this can be brought about by delaying the beginning of development with respect to width. A table shows the results obtained by calculation of the sight factor of two RDS types according to the derived formulae. These formulae appear to make it possible to calculate RDS parameters not only in the case of a visual detection of the target, but also in the case of operation with accompaniment of the target according to angles and width, selection of the mobile targets, etc. There are 1 figure, 1 table, and 14 references, 12 of which are Soviet.

SUBMITTED: September 19, 1956 (initially) and January 13, 1958 (after revision)

1. Direction finders (RF)--Range 2. Direction finders (RF)--Control systems 3. Mathematics--Applicatio

Card 2/2

AUTHOR: Gerdov, M. M.

TITLE: On the Possibilities of Application of the Superregenerator for Amplification of Very Short Signals

PERIODICAL: Radiotekhnika, 1960, Vol 15, Nr 3, pp 3[illegible]7 (USSR)

ABSTRACT: The paper describes the operational principle of a superregenerator capable of amplifying very short signals. In order to amplify very short signals by a superregenerator, it is necessary to shorten the time during which the amplitude of the amplified oscillations increases, as well as the time during which this amplitude decays. For that purpose, the losses in the superregenerative oscillating circuit should be reduced to a minimum during the building up of oscillations. The losses, on the contrary, should be increased to a maximum during the oscillation decay. The circuit diagram of a superregenerator satisfying the above conditions is shown on Fig. 1. During the building-up of oscillations the positive half-wave of the

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On the Possibilities of Application of the Superregenerator for Amplification of Very Short Signals

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SOV/108-15-3-7/17

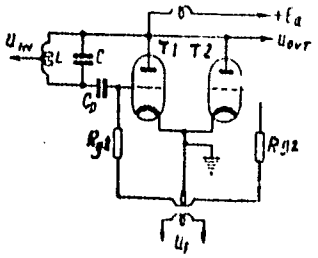

Fig. 1.

auxiliary voltage u_F is applied to the grid of tube T_1. At the same time a negative cut-off voltage is applied to the grid of T_2. Thus, T_2 does not influence the increase in oscillations. After termination of the build-up period the negative half-wave of the auxiliary voltage is applied to the grid of T_1, thus

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On the Possibilities of Application of the Superregenerator for Amplification of Very Short Signals

eliminating the self-excitation and introducing the conditions for oscillation decay. At the same time a positive voltage is applied to the grid of T_2 making this tube conductive. Then the internal resistance of T_2 is shunting the oscillation circuit. The state of cut-off and of conduction is produced in T_1 and T_2 at the frequency of the auxiliary voltage u_F. An experimental superregenerator based on above principles had an oscillation decay time of 0.4 microseconds. In the absence of shunting action the decay time was greater than 1.2 microseconds. There are 5 figures; and 4 Soviet references.

SUBMITTED: December 16, 1958

Card 3/3

GERDT, P.A.

Storage of canned goods in sectional metal cages in warehouses of canning enterprises. Kons.i ov.prom. 12 no.9:25-26 S '57. (MLRA 10:10)
(Canning industry--Equipment and supplies)

BEL'SKIY, D.I., kand.tekhn.nauk; [illegible], I.L., [illegible]; [illegible] L., L.F., inzh.; GAVRDT, R.A., inzh.

Investigating round-link chains for mine conveyors. Nauch.dokl. vys.shkoly; gor.delo no.3:143-147 '59. (MIRA 12:7)

1. Predstavlena kafedroy gornykh mashin i rudnichnogo transporta Karagandinskogo politekhnicheskogo instituta.

(Conveying machinery) (Link-belting)

SOV/19-58-6-649/685

AUTHORS: Zinov'yev, N.F., Marchenkov, A.Ye., Akman, L.A., Gerdyush, K.K., Stepanov, I.A., Abzriyelovich, S.S., Galasov, P.N., Ozolina, Z.V., and Brazhnikov, P.G.

TITLE: A Machine for Automatically Wrapping Bottles in Paper (Mashina dlya avtomaticheskogo zavorachivaniya butylok v bumagu)

PERIODICAL: Byulleten' izobreteniy, 1958, Nr 6, p 144 (USSR)

ABSTRACT: Class 81a, 15_{01}. Nr 113978 (581273 of 29 July 1957). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. A machine with a sprocket wheel conveyer band with sockets; a rocking lever for laying bottles into the sockets; semi-cylindrical grips with rollers and combs for guiding the wrapping paper, and a three-finger grip; arranged so that a bottle is lifted, wrapping up and put back into the conveyer socket; a knife cutting off paper running off a roll; and a discharge table with two rocking roi-

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A Machine for Automatically Wrapping Bottles in Paper

lers, a rocking lever and a plate bending and pressing the remaining loose paper end to the bottom of the bottle.

Correlation between the energy of the crystal lattice and the polarization of ions in heterogeneous compounds D. Sh. Guerdzhikov. *Acta. Chim. Acad. Sci. Hung.* 22, 153-7(1960)(in French).—The energy, U_a, of a crystal lattice (sum of the energies of formation, sublimation, and ionization) may be represented empirically by $U_a = A + B \ln (\alpha_a/\alpha_n)$, where A and B are consts., α_a a polarization constant, and α_n the same for an analogous compd. of lowest lattice energy. Such analogous compds. are chlorides and sulfates of alkali metals, alk. earth metals, etc.

A. VanHook

GUERDJIKOV, D. Cht.[Gerdzhikov, D. Sht.]

Relation between the chemical heats ions hydration and coefficient of polarization of suitable ions. Doklady BAN 14 no.5:471-473 '61.

1. Note presentee par St. Christov [Khristov, St.] member correspondant de l'Academie.

(Ions) (Hydration)

GERDZHIKOV, D. Sht. (Pomorie, Bulgaria)

Interrelations between the energies of metallic crystal lattices and the polarizable corresponding ions. Rev chimie Roum 9 no. 4: 263-264 Ap '64.

GERDZHIKOV, K.

4184. Kaolin activation. K. Gerdzhikov. *Tekhnika, Sofia*, 1954, 2, 29-31; *Plaste u. Kaut.*, 1955, 2, 22. The various theories on filler activity all agree on the effect of three factors: (i) the affinity of filler to rubber, (ii) particle dispersion, (iii) particle shape. Increased affinity means better bonding between the components and improves mechanical properties. The affinity of kaolin may be varied by altering the surface of the particles or coating them with a colloid. Experiments are described on treating kaolin with a solution of stearic acid and natural rubber in petroleum. This treatment improves strength by 10% and abrasion resistance by 250%. 421Cy.6-R

GERDZHIKOV, K.

Determining the sulfur and phosphorus in aerofloat. p. 45.

REKHNIKA. Vol. 4, no. 5, June/July 1955

Sofiia, Bulgaria

SOURCE: East European Accessions List (EEaL) Library of Congress, Vol. 6, No. 1, January 1957

GERDZHIKOV, K., inzh.

Activation of kaolin through its utilization in rubber industry.
Tekhnika Bulg 3 no.2:29-31 F '54.

BULGARIA

L. GERDZHIKOV, M. STOYANOVA and Kh. MADZHAROVA [Affiliation not given.]

"Treatment of Laryngitis with Penicillin Combinations."

Sofia, Suvremenna Meditsina, Vol 14, No 5, 1963; pp 14-15.

Abstract: Senior author has long been advocating use of single but large doses of combined penicillins to prolong penicillemia beyond that achievable with the commonly used 600,000 units daily for 3 days in streptococcal throat infections. Comprehensive clinical data are now reported on 11 and 7 children treated with the two methods. Results confirm that the combined single massive dose is superior in preventing recurrence, increasing antistreptolysin titers and in other ways improving the clinical conditions.

1/1

GERDZHIKOV, P.

Determining the load capacity of the soil and the thickness of elastic road paving and airfield runs by the C.B.R. method.

p. 23 (STROITELSTVO) Vol. 4, no. 5, 1957,
Sofiia, Bulgaria

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

GEORGIYEV, I.T.

Achievements of the Soviet Electrical Industry. Elektroenergiya (Electric Power), #12:1:Dec 55

KABAIVANOV, Vl.; NATOV, M.; GERDZHIKOVA, Sv.

Synthesis of ethyl aluminum sesquibromide and polyethylene in carbon dioxide atmosphere. Godishnik khim tekh 6 no.1:29-35 '59 (Publ. '60.)

GEORZHILOV, I.

GEORZHILOV, I.

"High Yields Are In The Hands of the Producer", P. 24. (KOOPERATIVNO ZEMEDELIE, Vol. 10, No. 3, Mar. 1955, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, June 1955, Uncl.

GERDZHIKOV, T.; GIULEVA, TS.

"Sprinklers in the Gorubso Bulgarian-Soviet Mining Company."

MINNO DELO, Sofiia, Bulgaria, Vol. 14, no. 2, Mar./Apr. 1959

Monthly list of East Europe Accessions (EMAI), LC, Vol. 8, No. 6, Sept 59
Unclas

GERDZHILOV, T., inzh.; GYULEVA, TS., inzh.

The UVG-2 sleeve for sidelong water supply in drilling holes. Bezop. truda v prom. 4 no.3:35-36 '60. (MIRA 13:6)

1. Gosudarstvennoye gornoye predpriyatiye "Gorubso," Bolgarskaya Narodnaya Respublika.
(Bulgaria--Boring machinery)

GARIN, I.I., inzh.; GERDZHOY, M.Ya., inzh.; SHINGAREVA, F.I., inzh.

Oxygen cutting of metals using a propane-butane mixture as fuel gas. Energ. stroi. no.1:121-123 '59. (MIRA 13:2)

1.Trest "Volgoenergomontazh".
(Gas welding and cutting)

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
Biological Chemistry

(3)

Metabolism and nitrogen fixation studies with Hyphantria caterpillars. J. Balogh[1] and G. Gere (Eotvos-Univ., Budapest). *Acta Biol. Sci. Hung.* 4, 431-52(1953)(in German); cf. Tóth, *et al.*, *C.A.* 37, 6348[8]; Franz and Leitenberger, *C.A.* 42, 9028*b*; Peklo and Satava, *C.A.* 43, 3531*e*.—A study was made of over 7000 American white tiger moth caterpillars (*Hyphantria cunea*) (I) with respect to (1) metabolic efficiency in the life-span of I, (2) metabolic efficiency in each of 3 contiguous phases of the life-span of I (to the 33rd day), (3) N metabolism with special attention paid to chitin formation and fixation of atm. N. Methods used include semimicro-Kjeldahl with Hg catalyst (for N); Soxhlet extn. (4-8 hrs.) of lipides with petr. ether, and digestion of the organism at room temp. in 10% KOH for 10-12 days, followed by filtration, washing of the residue (chitin), and detn. of N content. The caterpillars were fed on leaves of *Acer negundo*. A table is given, with evidence of high metabolic efficiency over the entire life-span. Tables present total wt. gain (known amt. of food) and water and lipide content of animals. The chitin content is described as low. Evidence is presented that the animal has higher N content than that accounted for by the total food ingested, thus indicating fixation of atm. N.

T. Lloyd Fletcher

CERE, G.

The examination of the feeding biology and the humification function of diplopoda and isopoda. In English. p. 257. ACTA BIOLOGICA. (Magyar Tudomanyos Akademia) Budapest. Vol. 6, no. 3/4, 1956.

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 5, No. 12, December 1956.

GEHE, G.

Investigation into the laws governing the growth of Lymantria cunea Drury caterpillars. In English. p. 43.
(ACTA [illegible] Vol. 7, no. 1, 1956. Budapest.)

SO: Monthly List of East European Accessions (EEAI) LC, Vol. 6, no. 6, June 1957. Uncl.

GERE, G.

HUNGARY / General and Specialized Zoology. Insects. Physiology and Toxicology.

Abs Jour : Ref Zhur - Biologiya, No 16, 1958, No. 73574

Author : Gere, G.
Inst : Hungarian AS
Title : Study of the Energy Exchange in Hyphantria cunea Drury Caterpillars

Orig Pub : Acta zool. Acad. sci. hung., 1957, 3, No 1-2, 89-105

Abstract : The energy exchange in second generation Hyphantria cunea Drury caterpillars (C) was studied in Hungary. Specific content of energy (SCE) in the food of C -- leaves of Acer negundo -- has on the average 4,380 cal. per g. of dry substance. The SCE of C slightly decreases from the I to the VI stage, and then abruptly increases up to pupation and is always higher than in the food. Therefore, the SCE of C during the first ecdysis is 25% higher; during the sixth ecdysis, 20%; and in pupa

Card 1/3

Abs Jour : Ref Zhur Biol., No 6, 1959, 23694

Author : Gere, Geza
Inst : -

Title : The Classification of Living Beings from the Point of View of Productive Biology and Their Role in Biocoenoses

Orig Pub : Allatt. kozl., 1957, 46, No 1-2, 71-78

Abstract : A new classification of living beings by consideration of their role in the metabolism and energy exchange is offered. The first group comproses the autotrophic plants (constructive). The role of these plants is in the accumulation and transmission of substances and energy in their decomposition. The organisms which are unable to fulfill these functions are called transferable by the author. The classification diagram is as follows:

HUNGARY/General Biology - General Ecology. B

Abs Jour : Ref Zhur Biol., No 6, 1959, 23694

Organisms

I: constructive (creation-accumulation, transfer-decomposition)		II: organism-transferring (accumulation, transfer-decomposition)	
A: organism-consumers (decrease the presence of energy of living substance of biocoenosis)		B: organisms, which restore consumed energy (do not decrease the presence of energy of the living substance of biocoenosis)	
increase in weight (accumulate actively)	do not increase in weight (accumulate passively)	increase in weight (accumulate actively)	do not increase in weight (accumulate passively)

Card 2/3

Abs Jour : Ref Zhur Biol., No 6, 1959, 23694

The organisms which belong to the transferring (II) are divided into those which are nourished by living (A) and by dead (B) substances. Organisms A decrease the resources of living substances and energy which is in them. Organisms B increase the supplies of living substance and energy. -- V.A. Kanzyuba

GERE, G.

Food consumption of Diplopoda and Isopoda as seen in open-air investigations. Acta zool Hung 8 no.3/4:385-415 '62.

1. Institut für Tiersystematik der L. Eotvos Universitat, Budapest. Director: Prof. Dr. Endre Dudich.

[redacted]

Nature and preservation [illegible] preparation.
Khirurgiia 40 no.8:115-[illegible] Ag '64.
(MIRA 18:3)

1. Khirurgicheskoye otdeleniye respublikanskoy bol'nitsy Kishineva, Moldavskaya Sovetskaya Respublika.

GEREB, Gyorgy, dr.,; VARGHA, Miklos, dr.

Therapeutic experiments to develop figure concept in feeble-minded children. Gyermekgyogyaszat 7 no.1:10-18 Jan 56

1. Pedagogiai Foiskola Nevelestudomanyi Tanszeke (Gereb Gyorgy dr.) es Idsg-Elmeklinika (huszak Istvan dr.) Szeged.
(MENTAL DEFICIENCY, psychol.
figure concept develop. in feeble-minded child., ther. methods (Hun))

FORGACS, Pal, dr.; GHREB, Gyorgy, dr.

Physiological and psychological aspects of fatigue.
Hepegeszsegugy 38 no.1-2:38-41 Jan-Feb 57.

1. Kozlemeny a Szegedi Testneveles es Sportegeszsegugyi Intezetbol (vezeto: Forgacs, Pal, dr. foorvos) es a Pedagogiai Foiskolarol (igazgato: Lerner, Karoly).
(FATIGUE
measurement, physiol. & psychol. methods (Hun))

GEREB, Gyorgy, Dr.; BACSKAI, Jozsefne, Dr.

Necessity of complex work in the neurological and psychological care of children. Orv. hetil. 99 no.29:977-981 20 July 58.

1. A Szegedi Ideggyogyaszati es Lelektani Gyermekgondozo Intezet (vezeto-foorvos: Bacskai Jozsefne dr.) kozlemenye.
(CHILD PSYCHOLOGY
complexity of work in psychol. & neurol. care of child. (Hun))

GERMB, Gyorgy, dr., foiskolai tanar. candidatus (Szeged)

Psychotherapy of enuresis with the aid of stimulation (enurograph).
Gyermekgyogyaszat 10 no.12:382-384 D '59.
(ENURESIS ther)
(PSYCHOTHERAPY)

BACSKAI, Jozsefne, dr.,sezeto.foorvos; GEREB, Gyorgy, dr. foiskolai tanar, kandidatus (Szeged)

Points of view on psychological determination of maturity in school children. Nepegeszsegugy 40 no.9:247-249 S '59.
(STUDENTS psychol)

SURNAME, Given Names

Country: Hungary

Academic Degrees:

Affiliation: Hemp Spinning Mill of Szeged (Szegedi Kenderfonógyár); Manager: (Vállalatvezető) Mária NAGYGYÖRGY

Source: Budapest, Magyar Pszichológiai Szemle, Vol 18, No 3, 1961, pp 294-305.

Data: "Psychological Investigation of the Fatiguing Effects of Working Processes Among Hemp Factory Workers."

Authors:

GERÉB, György, Dr
VIRÁGH, László

GPO 981643

GEREB, Gyorgy

Work psychological tests by reflexometric and tremometric methods.
Magy pszichol szemle 17 no.2:164-170 '60.

1. Szegedi Pedagogiai Foiskola. Igazgato: Lerner Karoly.

GEREB, Gyorgy, dr. (Szeged)

"Psychologicke studie SAV", vol.3, 1961; reviewed by Gyorgy Gereb. Magy pszichol szemle 19 no.3:385-386 '62.

GEREB, Gyorgy, dr.; VIRAGH, Laszlo

Psychological testing of the fatiguing effect of work processes performed by workers at hemp spinning mills. Magy pszichol szemle 18 no.3:294-305 '61.

1. Szegedi Kenderfonogyar (vallalatvezeto: Nagygyorgy Maria).

GEREB, Gyorgy, dr.

Some notes on the question of "reaction time" and "action time."
Magy pszichol szemle 19 no.2:233-235 '62.

GEREB, G. (Vengriya)

Application of reflexometric and tremometric methods in work psychology. Vop. psikhol. no.4:135-142 Jl-Ag '63. (MIRA 17:1)

GEREB, Gyorgy, dr., kandidatus , foiskolai tanar

"Studies in psychology." Vol.4. Reviewed by Gyorgy Gereb.
Magy pszichol szemle 20 no.3:477-478 '63.

1. Tanarkepzo Foiskola, Szeged, Alfoldi ut 3.

GEREB, Sandorne

Development of international relations of Hungarian trade unions. Munka 8 no.12:32-33 D '58.

1. Szakszervezetek Orszagos Tanacsa Nemzetkozi kapcsolatok Osztalya megbizott vezetoje.

GEREB, T. 1948

(Clinic for Nerv. & Psychiatrid Dis., U. of Szeged)

"The Vitamin A and Caroten Content of the Blood Serum in Different Diseases of the Nervous System."

Internat Zeit.fur Vitamin-forschung, 1948, 19/3-4, pp. 330-35
Abst: Exc. Med.11, Vol. 11, No. 2. p. 176

FAZEKAS, I.G.; GEREB, T.

Cerebral hitologic changes in carbon monoxide poisoning and its pathomechanism. Magy. belorv. Arch. 4 no.4:181-185 1951. (CIML 21:4)

1. Doctors. 2. Institute of Forensic Medicine (Head--Prof. Dr. Gyula I. Fazekas) and Neurological Clinic (Director--Prof. Dr. Istvan Huszak) of Szeged University.

GRUB, T.

Clinical aspects of aphasia in the light of the Pavlovian theory.
Orv. hetil. 94 no.33:897-901 16 Aug 1953. (CIML 25:1)

1. Doctor.

GERNB, Tibor

Traumatic symptomatology of the cingulate gyrus and medial surface of the brain. Ideg. szemle in Magy. belorv. arch. 7 no.1:1-3 Feb 54.
(CEREBRAL CORTEX
cingulate gyrus, traum. symptomatol.)
(BRAIN, wds. & inj.
symptomatol.)
(WOUNDS AND INJURIES
brain, medial surface, symptomatol.)

GKRES, Tibor, dr.

Subarachnoid alcohol therapy of sciatica and other painful diseases. Orv. hetil. 96 no.34:944-946 21 Aug 55.

(SCIATICA, ther.
alcohol, subarachnoid inject.)
(ALCOHOL, ETHYL, ther. use
sciatica)

GEREB, T.

The localization problem and the results of the physiology of higher nervous activity. Acta med. Hung. 18 no.3:301-317 '62.

1. Landesheilanstalt Fur Nerven- und Geisteskrankheiten (Direktor Dr. B. Maria) Budapest.

(CENTRAL NERVOUS SYSTEM) (AGNOSIA) (APRAXIA) (APHASIA)

GEREBEN, Zoltan, dr.; LUZSA, Gyorgy, dr.

Development of gallstones in the duodenum and megaduodenum with occlusion. Magy. radiol. 14 no.3:154-157 Je '62.

1. Mosonmagyarovari Varosi Tanacs Korhaza (igazgato: Kis Jozsef dr.) Sebeszeti (foorvos: Gereben Zoltan dr.) es Rontgen (foorvos: Luzsa Gyorgy dr.) osztalyanak kozlemenye.

(CHOLELITHIASIS compl) (DUODENUM dis)
(INTESTINAL OBSTRUCTION etiol)

SZENAS, Gyorgy; GEREBEN, Laszlo

Application of seismic refraction surveying in propecting for bauxite. Geofiz kozl 4 no.1:67-74 '55.

MIKUSKA, Jozsef; JAKAB, Andras; AUMULLER, Istvan; PORGA, Zoltan; GYORY, Jeno; PATKAI, Imre, dr.; SCHAFER, Lajos; BERTIK, Peter, dr.; KRAUS, Gyorgy

Rare goose and duck occurrences. Aquila 69/70:257-258 '62-'63 [publ. '64].

SCHMIDT, Egon; STERBETZ, Istvan; GYERESSY, Antal; SCHAFER, Lajos; TERNYAK, Jeno; MATE, Laszlo; GEREBY, Gyorgy; BERETZK, Peter, dr.

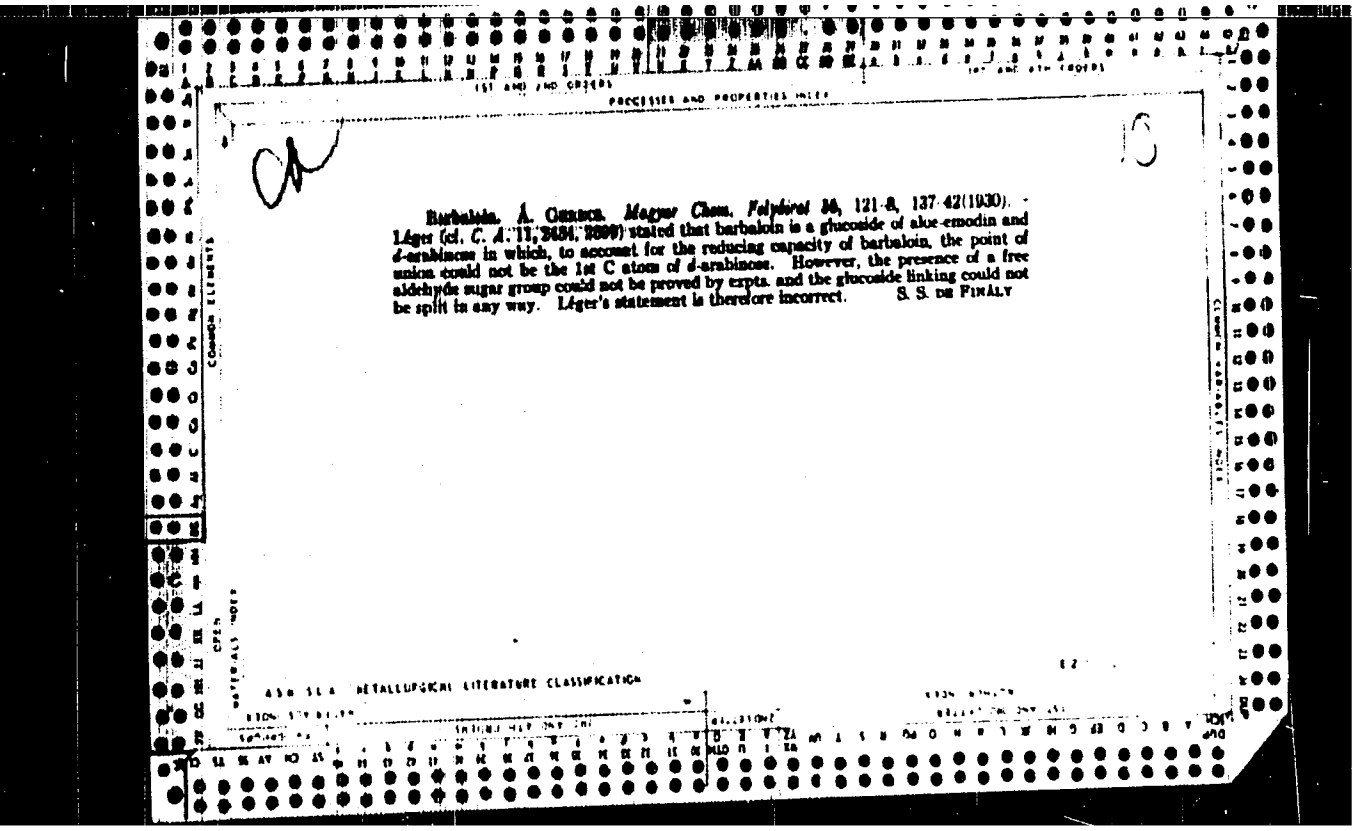
Data on the avifauna of the region between the Danube and the Tisza. Aquila 69/70:258-260 '62-'63 [publ. '64].

JAKAB, Andras; SCHAFER, Lajos; TAPFER, Dezso, dr.; RADETZKY, Jeno; PATKAI, Imre, dr.; BABAY, Karoly; SOLYMOSSY, Laszlo, dr.; GYORY, Jeno; FEKETE, Karoly; FERENCZ, Miklos; GERLEY, Gyorgy; SZEMERE, Laszlo; SAGHY, Antal, dr.; CSABA, Jozsef; KEVE, Andras, dr.; AGARDI, Ede; KOFFAN, Karoly; SCHMIDT, Egon

Data on the avifauna of Dunantul. Aquila 69/70:260-266 '62-'63 [publ. '64].

GERCHEV, Iliia, d-r

Hypnosis. Nauka i tekh mladezh no.10:3-4 O '57.



Barbaloin. A. Canaca. *Magyar Chem. Folyóirat* 36, 121-8, 137-42(1930). - Léger (cf. *C. A.* 11, 2484, 3090) stated that barbaloin is a glucoside of aloe-emodin and *d*-arabinose in which, to account for the reducing capacity of barbaloin, the point of union could not be the 1st C atom of *d*-arabinose. However, the presence of a free aldehyde sugar group could not be proved by expts. and the glucoside linking could not be split in any way. Léger's statement is therefore incorrect. S. S. DE FINÁLY

GEREGS, ARPAD

New cholesteryl acetals and steryl enol ethers. Preparation of testosterone esters from dehydroepiandrosterone. Arpád Gerecs and János Kollonitsch (Chinoin Co., Budapest). *Acta Chim. Acad. Sci. Hung.* 1, 281-8(1951)(in German).—Cholesterol (I) (1.86 g.) and 3.3 ml. cyclohexanone di-Et acetal (II) heated 1 hr. at 125°/200 mm., cooled, treated with 40 ml. Me_2CO contg. 1-2% C_5H_5N, and the resulting oily cryst. crystals triturated with more Me_2CO contg. C_5H_5N gave [illegible] g. *cyclohexanone cholesteryl Et acetal*, m. 60-5° after sintering at 45° (from petr. ether-Me_2CO contg. C_5H_5N), hydrolyzed by *N* HCl at 100° in 10 min. to I (quant. yield) and cyclohexanone (isolated as its semicarbazone). I (3.86 g.) and 6 ml. II heated 1 hr. at 130-5° at atm. pressure, the excess II distd. at 100°/1-2 mm., and the residue treated in 3 ml. C_6H_6 with 40 ml. Me_2CHOH contg. 1% C_5H_5N gave [illegible] g. *cyclohexanone dicholesteryl acetal*, $C_{60}H_{100}O_2$, m. 177-9° (from AcOEt contg. 0.5% C_5H_5N), hydrolyzed by *N* HCl at 100° in 3-4 min. to I. I (3.85 g.) and 3.5 ml. II heated 30 min. at 135-40°, 15 min. at 175-80°, and 40 min. at 180-6°, cooled, and the cryst. residue stirred with 30 ml. Me_2CO contg. 2% C_5H_5N and washed with 10 ml. Me_2CO gave 3.05 g. *1-cyclohexen-1-yl cholesteryl ether* (III), $C_{33}H_{54}O$, m. 110-11° (from AcOEt contg. 0.5% C_5H_5N), $[\alpha]_D^{[illegible]}$ −38° (C_6H_6), hydrolyzed by *N* HCl at 70° in 3 min. to I and cyclohexanone. I (3.86 g.) and 3 ml. *1-cyclohexen-1-yl Et ether* (b. 153-63°, obtained by heating II 1 hr. at 100-5° and 1 hr. at 160-5°) heated 15 min. at 135-40° and 105 min. at 165-70° and treated as above gave 3.40 g. III. II (1.2 ml.) and 1 g. 3β-hydroxy-5-androsten-17-one heated 50 min. at 130-40°, 15 min. at 175-80°, and 45 min. at 180-6°, cooled, and the cryst. residue triturated with 1 ml. MeOH contg. C_5H_5N, filtered off, and washed 3 times with 0.5 ml. MeOH contg. C_5H_5N gave 1.08 g. *3β-(1-cyclohexen-1-yloxy)-5-androsten-17-one* (IV), [illegible], needles from 200 ml. abs. EtOH contg. C_5H_5N, m. 178-80° (the melt is completely clear at [illegible]), $[\alpha]_D^{[illegible]}$ −6° (C_6H_6). IV ([illegible] g.) in 2[illegible] ml. PrOH (distd. from Mg) treated at 100° with 1 g. Na in 15-16 portions during [illegible] min., heated 15 min. more at [illegible] until the Na disappeared, cooled, poured in 120 ml. H_2O, filtered, and washed with H_2O, gave 0.97 g. *3β-(1-cyclohexen-1-yloxy)-5-androsten-17β-ol* (V), [illegible], fine needles from abs. EtOH contg. C_5H_5N, m. 162-4°, $[\alpha]_D^{[illegible]}$ −52° (C_6H_6), hydrolyzed by *N* HCl at 100° in 5 min. to a quant. yield of 5-androstene-3β,17β-diol, m. and mixed m.p. 173-5°. V *acetate*, [illegible], from V and Ac_2O in C_5H_5N kept overnight at room temp. and poured in H_2O, m. 142-5° (from abs. EtOH contg. C_5H_5N); V *propionate* (29.1 g.), from 26.15 g. V and 3[illegible] $(EtCO)_2O$ in 312 ml. C_5H_5N kept at room temp. 34 hrs. and poured into H_2O, m. 121-4° (from abs. EtOH), $[\alpha]_D^{[illegible]}$ [illegible] (C_6H_6). V acetate (0.27 g.) stirred and heated 0.5 [illegible] with *N* HCl at 100°, cooled, filtered, washed with H_2O, and dried gave 0.21 g. *17β-acetoxy-5-androsten-3β-ol*, m. 146-7°, oxidized by refluxing 11 hrs. with 0.65 g. [illegible]-$BuO)_3Al$, 3.3 ml. anhyd. Me_2CO, and 18 ml. anhyd. C_6H_6, cooling, washing with *N* H_2SO_4 and H_2O, drying, distg. the solvent, and triturating with petr. ether, to 0.12 g. *testosterone acetate*, m. 139-41°, $[\alpha]_D^{[illegible]}$ 88° (abs. EtOH). Similarly 23.45 g. V propionate and 200 ml. *N* HCl heated and stirred 5 min. at 80° gave 19.65 g. crude *17β-propionyloxy-5-androsten-3β-ol*, m. 154° (after sintering at approx. 120°), oxidized with 64.5 g. (*tert*-$BuO)_3Al$, 1785 ml. C_6H_6, and 39[illegible] ml. Me_2CO in 11 hrs. to 15-16 g. crude *testosterone propionate*, m. 117-19° (from petr. ether), which, further recrystd. from $MeOH$-H_2O, m. 120-1°, $[\alpha]_D^{[illegible]}$ 82° (abs. EtOH).

Richard I. Akawie

CA

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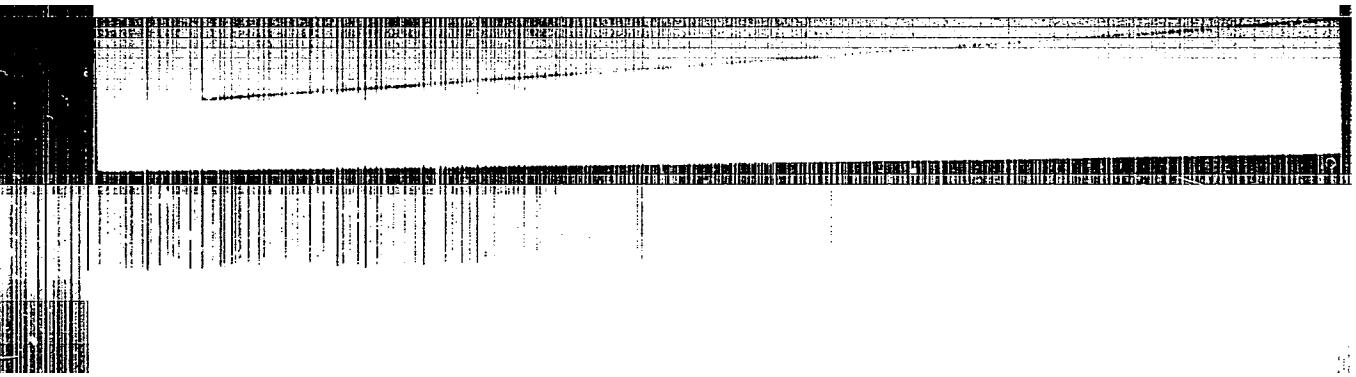
Modified synthesis of 2-methyl-4-amino-5-(ethoxymethyl)pyrimidine. G. Fodor, A. Gyorgy, I. Kiss, Yu. Kalkouich, Yu. Vein, and E. Kovács (Szeged State Univ., Hung.). *Zhur. Obshchei Khim.* (*J. Gen. Chem.*) 21, 1897-1902(1951).—The pyrimidine synthesis from esters of enols has been extended to enol ethers. To 23 g. Na wire in 800 ml. C_6H_6 was added 83 g. $EtOCH_2CH_2CN$ and 90 g. HCO_2Et at 8–10°; after 3 hrs. the ppta. of the Na enolate was complete; this was allowed to stand 3 days at 18°, the mixt. treated with 125 g. $MnSO_4$, kept 3 hrs. at 55°, filtered, and the filtrate distd., yielding 32.3 g. *α-methoxymethylene-β-ethoxypropionitrile* (I), b. 92–5°, b. 64–71°, b. 71–92° (the above are the b.ps. of the 3 fractions, all of which gave analyses corresponding to the above and were apparently composed of the 2 geometrical isomeric structures possible for the product). The above Na salt suspd. by centrifuging and treated with $HC(OEt)_3$ in the presence of $PhSO_3H$ in dry Et_2O readily formed the *α-ethoxymethylene analog* (II), an oil which was not purified further. The Na salt with *p*-$O_2NC_6H_4COCl$ gave 60% *α-p-nitrobenzoxymethylene-β-ethoxypropionitrile*, m. 109–10° (from C_6H_6). I (3.82 g.) and 1.16 g. acetamidine in EtOH let stand 24 hrs. give 66% *2-methyl-4-amino-5-(ethoxymethyl)pyrimidine*, isolated as the *picrate*, m. 181–3°; *free base*, m. 80°. A similar result is obtained from I and acetamidine-HCl treated with an equimol amt. of EtONa in abs. EtOH; the product may be isolated as the *HCl salt*, m. 208° (from BuOH). The latter procedure with $EtOCH_2C(:CHOAc)CN$ and acetamidine-HCl in C_6H_6 gave *acetamidine acetate*, m. 163–5°, and a good yield of *2-methyl-4-amino-5-(ethoxymethylene)pyrimidine*, after sublimation *in vacuo*. Bromoacetal (21 g.) kept 12 hrs. at room temp. with 4.1 g. NaCN in aq. EtOH in the presence of NaI apparently did not react; heating bromoacetal with KCN and NaI in aq. EtOH to 75° gave only traces of N-contg. products; neither did bromoacetal react with CuCN on heating. Dichromate oxidation of $(EtOCH_2)_2CHOH$ gave *1,3-diethoxy-2-propanone*, b. 95–100°; this (14 g.) shaken with fresh $NaHSO_3$ soln. and extd. with Et_2O gave an oil described as the cyanohydrin(?), which treated in the Et_2O soln. without purification with Ac_2O gave *1,3-diethoxy-2-acetoxy-2-cyanopropane*, b. 104–6°. No satisfactory method of cleavage of the Ac group was found; even heating with P_2O_5 and $POCl_3$ in pyridine gave only polymeric products so that pure $(EtOCH_2)_2C(OH)CN$ could not be prepd.

G. M. Kosolapoff

GERECS, A.

(1)

The chemistry of furan [derivatives]. R. König, A. Gerecs, and Z. Földi (Chinoin Enterprises, Budapest). *Acta Chim. Acad. Sci. Hung.* 3, 157–63(1953).—2-Chloro-2-acetyloxetane (I) is cleaved by dil. HCl to give mainly the *ether* (II) of $HOCH_2CH_2CHClAc$ (III) (Cf. Stevens and Stein, *C.A.* 34, 0270⁹). However, fractional distn. of the crude II yields a small amt. of a *compd.* (IV), C_4H_7ClO, b_{60} 51–3°, d_{15} 1.139, corresponding to III less 1 mole of H_2O. II with dry HCl at 0° gives 65% *2-methyl-2,3-dichlorotetrahydrofuran* (V), b_7 42–3°, also obtained in 82% yield by heating II with $SOCl_2$. V (15 g.) heated 0.5 hr. with 8 ml. dry pyridine yields 10.2 g. IV; V is also converted to IV by anhyd. Na_2HPO_4 or anhyd. NaOAc. II (10 g.) treated overnight with 20 ml. concd. HCl yields 8.5 g. *ClCH$_2$CH$_2$CHClAc* (VI), b_7 88°, d_{15} 1.239; 16.2 g. I heated with 32 ml. concd. HCl gives 7 g. VI. Refluxing 16.5 g. VI 1 hr. with 8.2 g. anhyd. NaOAc in 20 ml. AcOH gives 5.4 g. *AcOCH$_2$CH$_2$CHClAc* (VII), $b_{0.6}$ 75–8°. *2-Methyl-2-ethoxy-3-chlorotetrahydrofuran* (VIII), b_{11} 55°, is obtained by treating V with NaOEt in EtOH, or by refluxing VII with abs. EtOH. II and IV with $(EtO)_4CH$ and $PhSO_3H$ also give VIII. *2-Methyl-2-methoxy-3-chlorotetrahydrofuran*, b_7 45°, is obtained by boiling IV with MeOH. VI and VII are converted to the corresponding thiazole derivs. with H_2NCSNH_2. J. L. O'B.



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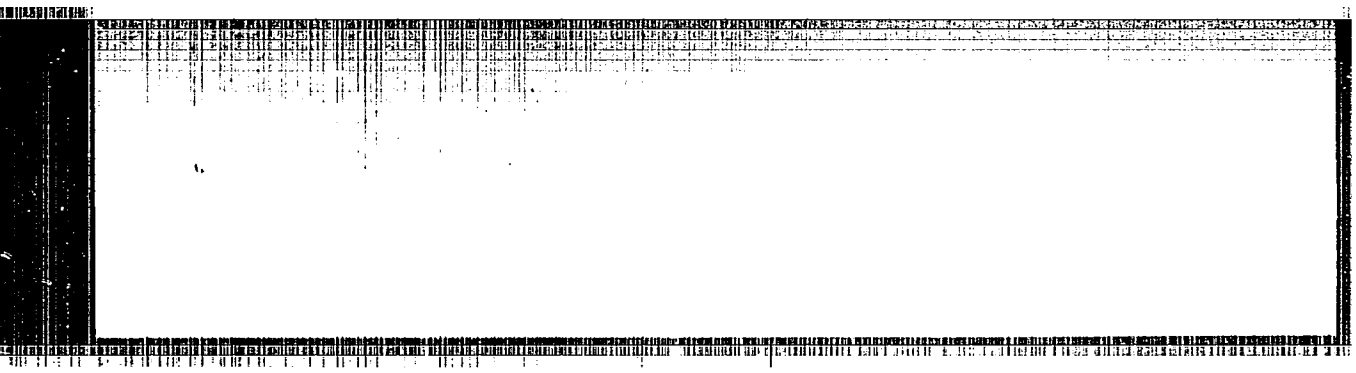

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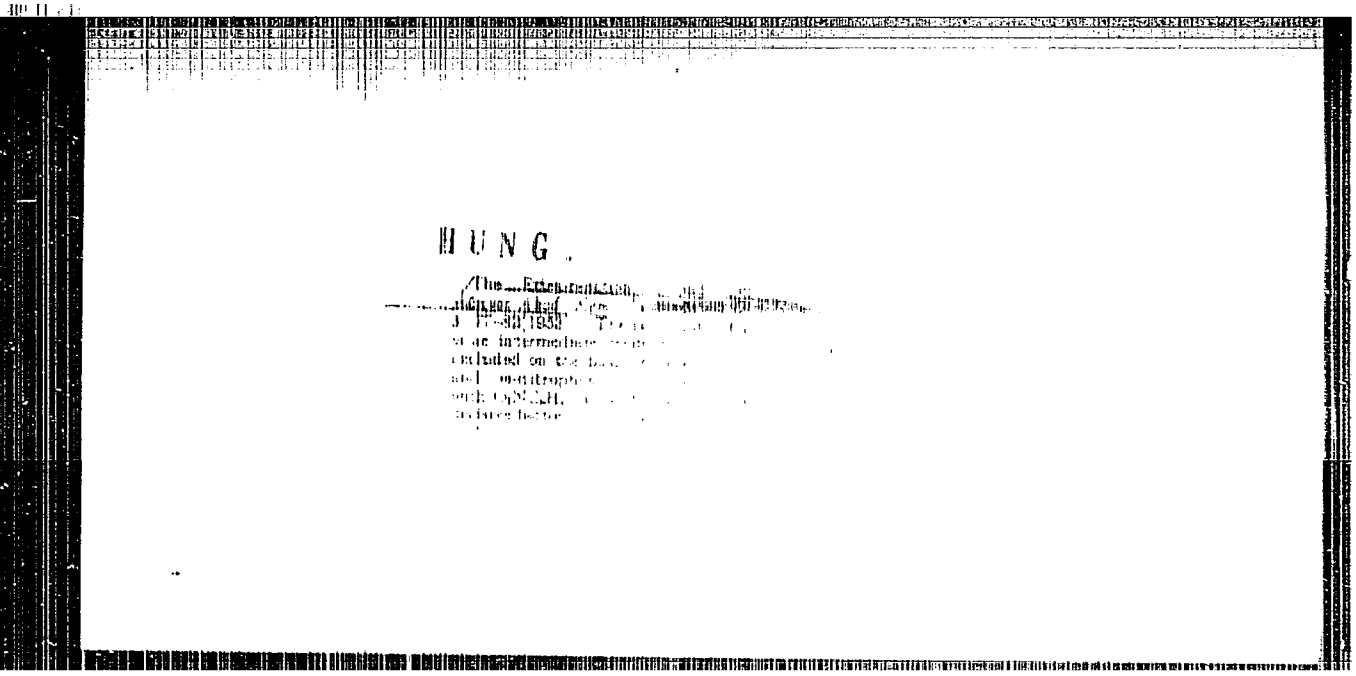

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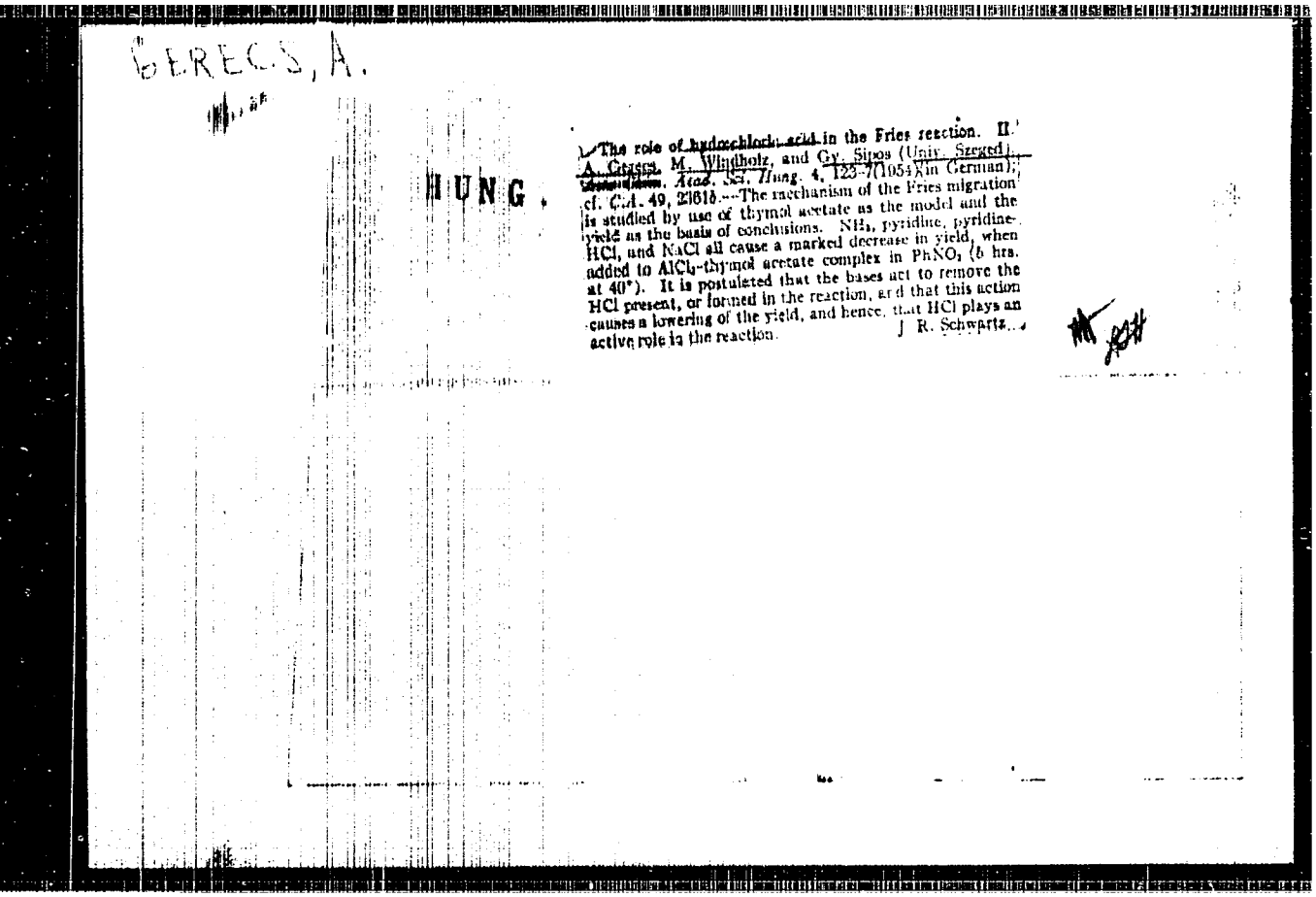

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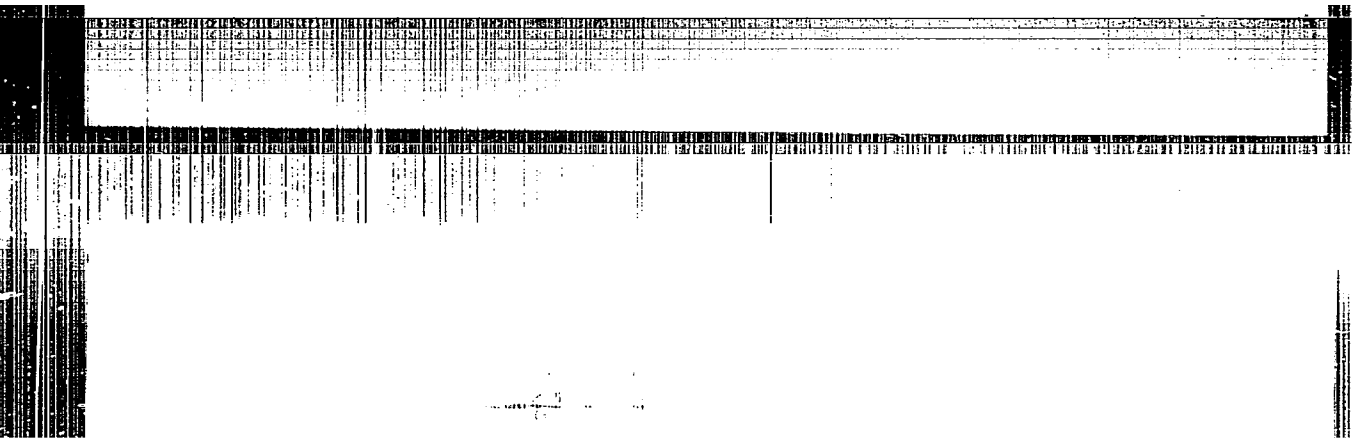
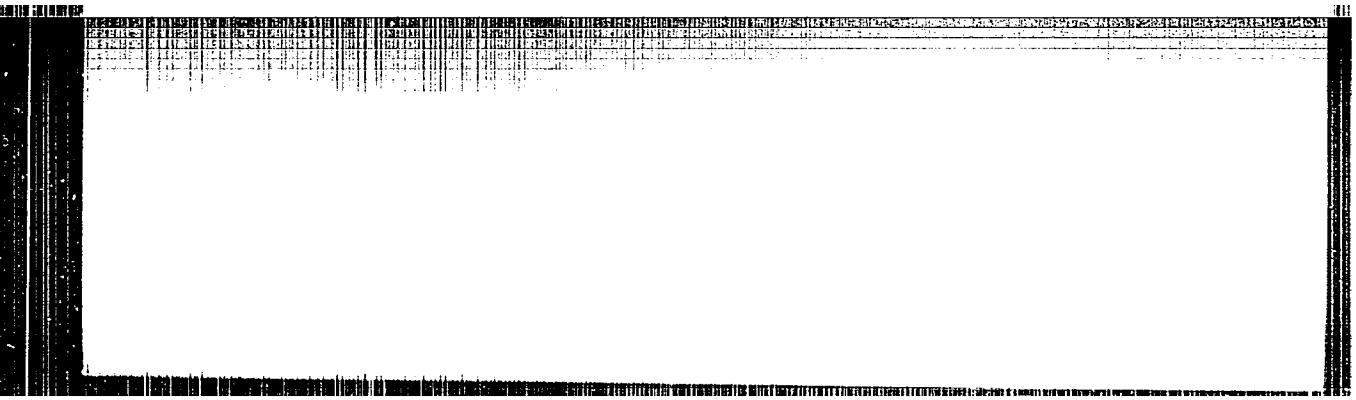
The role of hydrochloric acid in the Fries reaction. II. A. Gerecs, M. Windholz, and Gy. Sipos (Univ. Szeged). *Acad. Sci. Hung.* 4, 123–7 (1954) (in German); cf. *C.A.* 49, 2161b.—The mechanism of the Fries migration is studied by use of thymol acetate as the model and the yields as the basis of conclusions. NH_3, pyridine, pyridine-HCl, and NaCl all cause a marked decrease in yield, when added to $AlCl_3$-thymol acetate complex in $PhNO_2$ (6 hrs. at 40°). It is postulated that the bases act to remove the HCl present, or formed in the reaction, and that this action causes a lowering of the yield, and hence, that HCl plays an active role in the reaction. J. R. Schwartz

GERECS, ARPAD

Ring complexes formed with aluminum chloride. Árpád Gerecs (Inst. Appl. Chem., Szeged) and Mária Windholz. *Acta Chim. Acad. Sci. Hung.* 5, 183-6(1954)(in German).—Qualitative observation of the loss of HCl is used to ascertain whether o-HOC_6H_4Ac (I) and related compds. form ring complexes with anhydrous $AlCl_3$ (II). When 1 ml. of a soln. of 10 g. II in 30 g. $PhNO_2$ is added to 0.1 g. of I, o-HOC_6H_4CHO, o-$HOC_6H_4CO_2Me$, or o-$O_2NC_6H_4OH$ at room temp., HCl is evolved. No evolution of HCl is observed under the above conditions with the para isomers. On heating (temp. listed) HCl is evolved copiously from o-HOC_6H_4NHAc (70-5°), o-HOC_6H_4NHBz (60-5°), α-BzC-Ph:NOH (70-5°), α-PhCHOHCPh:NOH (130-5°), α-benzaldoxime (160-5°). No HCl is evolved from m-HOC_6H_4NHAc (75°), m-HOC_6H_4NHBz (80°), PhNHAc (180°), PhNHBz (130°), β-benzil monoxime (75°), β-benzoin oxime (150°), β-benzaldoxime (100°). Weak evolution of HCl (at temp. listed) is observed with α- and β-furaldoxime (155-60°), "cis- and *trans*-benzamidocyclohexanol" (105°), *N*-benzoyl-*dl*-ephedrine (130°), and *N*-benzoyl-*dl*-ψ-ephedrine (180°). This reaction is suitable for yielding quick information as regards certain position- and stereoisomeric conditions. Robert S. Rouse





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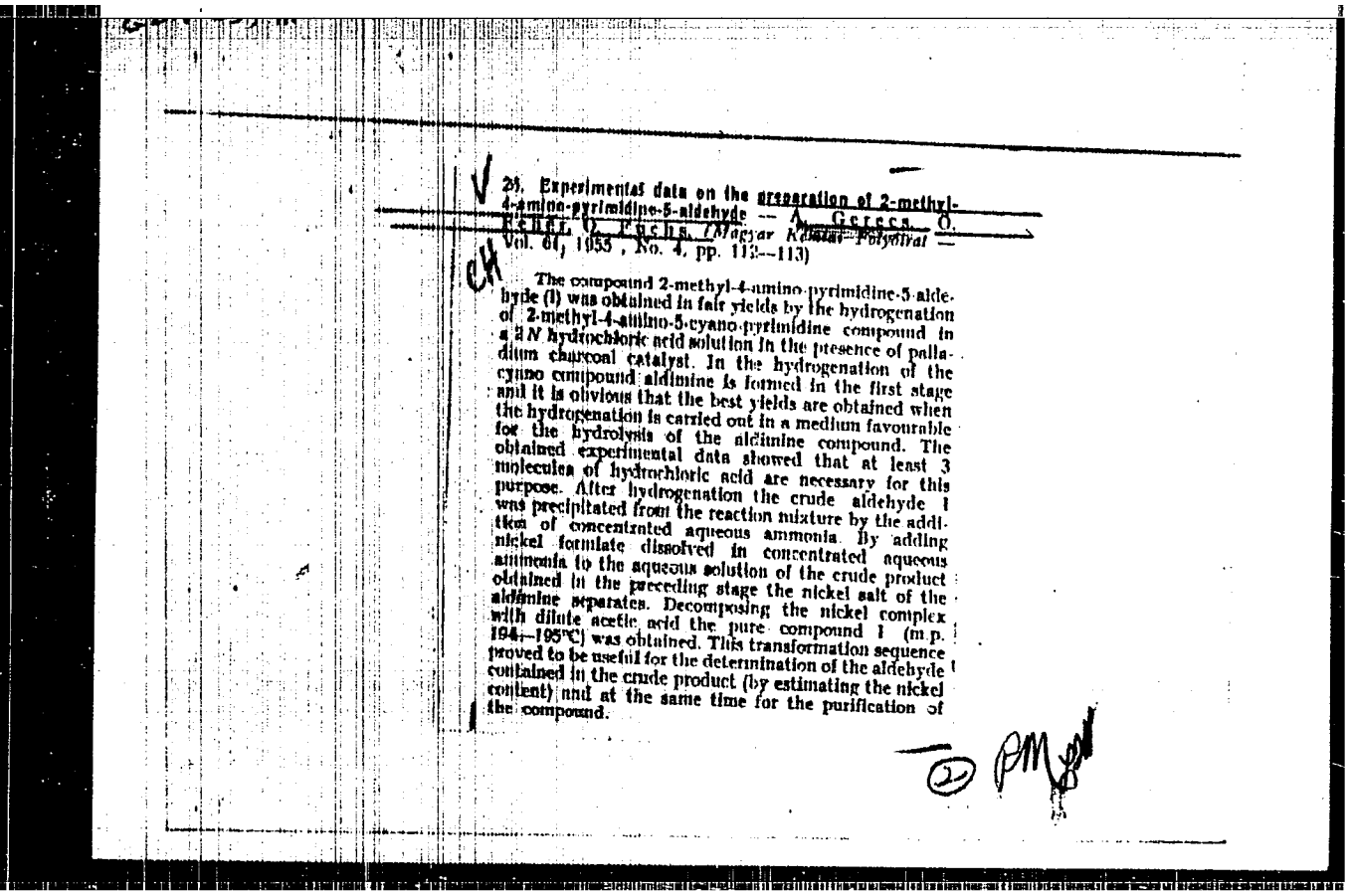

29. Experimental data on the preparation of 2-methyl-4-amino-pyrimidine-5-aldehyde. — A. Gerecs, O. Pecile, I. Magyar Kémiai Folyóirat — Vol. 61, 1955, No. 4, pp. 112—113)

The compound 2-methyl-4-amino-pyrimidine-5-aldehyde (I) was obtained in fair yields by the hydrogenation of 2-methyl-4-amino-5-cyano-pyrimidine compound in a 2 *N* hydrochloric acid solution in the presence of palladium charcoal catalyst. In the hydrogenation of the cyano compound aldimine is formed in the first stage and it is obvious that the best yields are obtained when the hydrogenation is carried out in a medium favourable for the hydrolysis of the aldimine compound. The obtained experimental data showed that at least 3 molecules of hydrochloric acid are necessary for this purpose. After hydrogenation the crude aldehyde I was precipitated from the reaction mixture by the addition of concentrated aqueous ammonia. By adding nickel formiate dissolved in concentrated aqueous ammonia to the aqueous solution of the crude product obtained in the preceding stage the nickel salt of the aldimine separates. Decomposing the nickel complex with dilute acetic acid the pure compound I (m.p. 194—195°C) was obtained. This transformation sequence proved to be useful for the determination of the aldehyde contained in the crude product (by estimating the nickel content) and at the same time for the purification of the compound.

(-1 PERES A.

USSR/Physical Chemistry. Surface Phenomena. Adsorption. Chromatography. Ion Exchange. B-13

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22566.

Author : O. Libor, A. Peregs.
Inst : Not given
Title : Survey of Hungarian Glauconites.

Orig Pub : Magyar Kem. folyoirat, 1956, 62, No 9, 308-313 (hung.,res.nem.)

Abstract : It was found that Hungarian glauconites possess cation exchange properties. It is concluded on ground of examination of Na^+ on Ca^{++} exchange that glauconite stabilized by Na silicate or aluminate shows a maximum intensity of ion exchange when shaken up with 0.2 n. $CaCl_2$. At the same time non-stabilized glauconite attains the same maximum of ion exchange properties only when I n. $CaCl_2$ is used. After heating till over 400° the glauconite ion exchange capacity decreases. It is found that in water softening process the use of a suspended layer of glauconite gives better results than of an immobile one.

Card 1/1 -202-

HUNGARY / Organic Chemistry. Natural Substances and Their Synthetic Analogues. G

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 61055.

Author : A. Gerecs, M. Windholz.
Inst : Academy of Sciences of Hungary.
Title : Preparation of Some Derivatives of Glucopyranosylbenzene (Brief Report).

Orig Pub: Acta chim. Acad. sci. hung., 1957, 13, No 1-2, 231-232.

Abstract: The previously described nitration conditions of tetraacetyl-β-D-glucopyranosylbenzene (I) (Craig J. M., Bonner W. A., J. Amer. Chem. Soc., 1950, 72, 4808) (tetraacetyl-β-D-glucopyranosyl = TAGP)

Card 1/3

HUNGARY / Organic Chemistry. Natural Substances and Their Synthetic Analogues. G

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 61055.

Abstract: having been somewhat altered, together with n-TAGP (II) also o-nitroisomer thereof (III) was obtained. 100 g of $Cu(NO_3).3H_2O$ is added to the solution of 20 g of I in 320 ml of $(CH_3CO)_2O$ (40°, 30 min.) and is left to age (40°, 7 hours). The solution of the reaction mixture in 800 ml of water is extracted with ethylacetate and II is obtained, yield 21.8%, melting point 161 to 163° (from absolute alcohol), and from the mother liquor of III - yield 7%, melting point 118 to 119°. The catalitic reduction of II (4 g in 160 ml of absolute alcohol + 0.5 g of Pd/C) results in n-TAGP-aniline (IV), yield 92.5%, melting point 156 to 157.5°. n-TAGP-acetanilide (V) was prepared by acetylizing

Card 2/3

HUNGARY / Organic Chemistry. Natural Substances and Their Synthetic Analogues. G

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 61055.

Abstract: IV, yield 79%, melting point 148 to 150°. Diacetylation of V (5.32 g in 210 ml of absolute CH_3OH + + 15 ml of 0.1 n. CH_3ONa, 2 days, about 20°) results in n-(β-D-glucopyranosyl)-acetanilide, yield 63%, melting point 191 to 192.5° (from isoamyl alcohol with drying on P_2O_5). n-TAGP-(n'-acetamido)-benzenesulfamidobenzene was prepared from 2.74 impure IV in 25 ml of C_5H_5N (0°) + 1.51 g of n-$Ch_3CONHC_6H_4SO_2Cl$, yield 84%, melting point 220 to 221° [from dilute acetone, after which from $(CH_3CO)_2O$].

Card 3/3